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ABSTRACT

In recent years, social scientists have developed an increased interest in the processes by which individuals are matched to jobs. This involves both an examination of the characteristics of job seekers who are rewarded in labor markets and an analysis of how employers evaluate worker characteristics when making hiring and promotion decisions. Of special importance to this emerging research has been the role of educational credentials. However, there has been little effort to investigate specific job matches directly. One study conceptualized job matches as employment transactions. To examine these transactions, an interview instrument was designed and used to interview the most recent appointees in 12 occupational categories in 6 organizations, as well as the individuals who hired them. Questions focused on the role of educational credentials in job assignment, and elicited information on the role of educational choice, the effect of schooling on job performance, the issue of overeducation, and the importance of educational background. This research can lead to important knowledge of the determinants of inequality in the labor force. (Author/KC)

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STUDYING JOB MATCHES: METHODOLOGICAL AND PRACTICAL CONSIDERATIONS

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ABSTRACT

In recent years, social scientists have developed an increased interest in the processes by which individuals are matched to jobs. This involves both an examination of the characteristics of job-seekers that are rewarded in labor markets, and an analysis of how employers evaluate different worker characteristics when making hiring and promotion decisions. Of special importance to this emerging research has been the role of educational credentials. Unfortunately, however, there has been little effort to investigate specific job matches directly. This paper reports on the interview instruments that I designed and administered to examine job matches. I discuss not only the appropriate methodological, theoretical, and substantive issues, but also the more practical and logistical issues involved in this kind of research.

STUDYING JOB MATCHES: METHODOLOGICAL AND PRACTICAL CONSIDERATIONS

I. INTRODUCTION

Sociologists interested in occupational attainment have recently begun to examine the processes by which people are matched to jobs (Granovetter, 1974, 1981; Lin et al. 1981; Sorensen, 1983). This research renews a concern originally expressed by labor market economists of the forties and fifties with how workers locate job openings (Reynolds, 1951; Lester, 1954). It also attempts to go beyond the status attainment paradigm of the sixties and seventies (Blau and Duncan, 1967) by examining the role of social contacts in the labor market. Overall, job matching research seeks to understand the practices adopted and the information sources utilized by labor market participants, typically job seekers.

The developing research has taught us much about how workers find and secure jobs, but there has as yet been little effort to examine job-matches directly by studying worker behavior and employer behavior together. Largely because the requisite data to do this do not exist, one of three strategies has generally been adopted. The most common practice has been to investigate how workers with certain characteristics are distributed across occupations, and to infer from this the matching processes that put them there. Unfortunately, such inferences are necessarily

indirect, and one large step removed from the actual transactions themselves. Second, there is a large literature from both sociology (Lin et al., 1981) and economics (McCall, 1970) on patterns of job search, but the concerns of these studies have yet to join with studies of employer behavior to form a study of job matching per se. Finally, there have been a few studies of employer behavior (Berg, 1971), but these have usually been non-systematic and impressionistic, and have generally tended to neglect the supply side.

Below, I describe the methodology of I study I am conducting that empirically examines job matches directly by analyzing data from both sides of the job match. I restrict my attention in this paper to those aspects of job matches that involve educational credentials and formal schooling. Since substantive results of the research are reported elsewhere (Bills, 1984a; 1984b), the goals of this paper are to describe the substantive concerns that motivated the research, the research strategy and design, issues of conceptualization and measurement, and the methodological and theoretical implications of the study.

II. THE THEORETICAL IMPORTANCE OF JOB MATCHES

Statistical models of occupational attainment permit us to establish the strength and persistence of the empirical relationship between attainment and a wide range of its determinants. As social measurement goes, these estimates are exceptionally precise. Social researchers have developed an

elaborate technology for measuring the effects of variables representing social background, cognitive and non-cognitive characteristics, and educational attainment on the subsequent achievements of individuals. From these estimates, inferences can be drawn as to how the process of stratification operates.

The problem with all of this is that these inferences must remain indirect and empirically unverified as long as they are based on data from the point of view of job-holders or job-seekers. That is, occupational attainment not only requires that an individual possess an adequate assortment of social and technical skills, but also that an employing organization be willing to acknowledge these resources and make a selection decision (whether a hiring or a promotion) based upon them. People not only allocate themselves into a set of occupational roles, but they are also allocated to them. Thus, the other side of "status attainment" is "employer decision making."

An example should make this logic clearer. Social scientists have long debated about why more highly educated workers attain better jobs. Sociologists of the "technical-function" school (critiqued by Collins, 1979) and human capital economists (Mincer, 1974) maintain that schools teach the sorts of skills and knowledge that make people more productive workers. A similar position has been advanced by those who see schooling as providing the proper sorts of social or noncognitive dispositions that allow people to operate in hierarchical work settings (Bowles and Gintis, 1976). Proponents

of screening theory (Riley, 1979), in contrast, argue that employers select more educated employees as a means to "screen out" undesirable candidates, regardless of whether or not the educated worker learned anything useful in school. Essentially, schools are held to sort out the less able. Signalling theory is similar to this, and holds that more potentially productive workers signal this capacity to employers through their decisions to pursue extensive schooling, and that employers respond to this signal. Finally, credentialist theory contends that employers generally act irrationally by selecting on educational credentials, since there is no evidence that more highly educated workers are any more productive than those with less schooling (Berg, 1971). The most extreme form of this position suggests that not only does school fail to augment productive capacity, but it further fails to sort the able from the less able.

Based strictly on the estimates observed in attainment models, it is impossible to say which of these positions is most empirically accurate. Since analysts have rarely studied employer behavior directly, our models simply do not allow an unambiguous adjudication between these positions (fn 1). Clearly, other kinds of data are called for, specifically, data from those who are actually making decisions to screen, read signals, or otherwise evaluate job candidates (fn 2).

Conceptualizing The Job Match

Job matches are best conceptualized as special cases of transactions. The concept of transaction was most developed by

Commons (1950) who understood them as the means by which individuals and collectivities distribute and allocate social and economic resources of all kinds. This directs our attention to the implicit or explicit bargaining attendant to transactions, and to the social context in which they occur (Williamson, 1975).

The two principle employment transactions are hirings (i.e, organizational entry) and promotions (i.e., organizational advancement). (Self-employment represents a case in which an individual is his or her own employer.) Other employment transactions (transfers, lay-offs, demotions, lateral moves, pay adjustments, firings, retirements, etc.) can be interpreted for now as special cases of hirings and promotions.

A job match (or again, an employment transaction) can be characterized as the culmination of a decision or a series of decisions on the part of a job candidate and an appointing manager within an organizational and institutional structure. These decisions, as Simon's (1976) school of organizational theory suggest, are based on incomplete information, differentially distributed power, and rationality that is bounded by time and available resources. Some organizational decisions may be more implicit than explicit, in that they represent the unobtrusive kinds of controls that result from routinized organizational practices. For example, the "decision" not to hire high school dropouts may in a particular case not be a conscious decision at all, but rather embedded in the formal structure of the organization as a job description. Similarly,

not all decisions reached by job candidates or hiring managers are necessarily conscious or cognitive decisions.

III. STUDY DESIGN

To examine these sorts of transactions, I interviewed the most recent appointees to twelve occupational categories in each of six organizations, as well as the individual most responsible for making the particular appointment. This produced a sample of seventy-two job matches. Below I describe a) sampling and selection procedures, b) the six organizations, c) the twelve occupations, and d) issues of the conceptualization and measurement of those aspects of job matching dealing with education. Throughout, I emphasize the practical and logistical problems of the research design, as well as the more routine sorts of methodological issues. This is because I believe the study should be replicated, and being an exploratory one to some degree, improved upon.

Sampling and Selection

Each organization, as I describe below, was selected to be representative of a broader range of organizations. If none is entirely "ideal typical" in a strict Weberian sense, all at least approach being ideal types in ways that make generalizations from them possible. Because of the sensitivity of hiring decisions, each organization and each interviewee was promised full confidentiality as a condition of participation. Because of this, my description of each organization must be sketchy.

The Six Organizations

1) Loop Finance is a large financial institution that operates in international as well as local markets. The organization has numerous systems of career advancement, well-established personnel policies, and various training programs.

2) Northside Manufacturing has been a fixture in its community for decades. A large employer, it was hit especially hard by the economic downturn of the early eighties, and seemed to be slowly pulling out of this during the time we conducted our interviews. The plant, which also houses the firm's corporate headquarters, employs a diverse workforce, ranging from unskilled laborers to highly-skilled employees well-acquainted with state of the art manufacturing and inventory techniques.

3) Exurb Consulting is a suburban-based firm with offices throughout the Midwest. It provides engineering and technical consulting to a variety of construction, manufacturing, and public works projects. We interviewed at both the Chicago suburban office, and at corporate headquarters in a small city some two hours away. The workforce is predominantly professional, and is, like Loop Finance, strictly non-union.

4) City Hospital is a large and well-established urban hospital. While having a strong reputation in the health

industry, itis located in a relatively unattractive part of the city, and this affects its ability to recruit some kinds of workers.

5) Lakeside Services is a governmental agency providing essential services to a wide geographical area. Like most public agencies, its sources of revenues have been eroded both by the recession and by a shifting tax base. The agency employs a diverse workforce, and has drawn some of its top technical people from a national pool. Civil Service considerations are crucial to the agency's staffing patterns.

6) Regional Authority is responsible for an enormous part of the operations of the urban infrastructure. A large employer, the Authority utilizes a newly-designed and instituted Career Service system as opposed to the more traditional Civil Service system.

The Twelve Occupations

To gain an understanding of how selection and allocation operated throughout the hierarchies of these six organizations, I wanted each to be represented by a broad assortment of occupations. To achieve this, I selected the following twelve occupational categories in each organization:

1) middle management

2) lower management

3) scientific and technical staff

4) production supervisors

5) accountants

6) executive secretaries

7) secretaries

8) crafts workers

9) sales staff

10) skilled operatives

11) semi-skilled operatives

12) unskilled workers or laborers

This list was based with some modifications on Hallak and Caillods' (1980) study of Panamanian employers (fn 3). Hallak and Caillods interviewed employing managers in a range of Panamanian firms about their hiring criteria for many of these occupations. They did not complete the match by interviewing workers, yet their study provided considerable guidance for the demand side of my study.

No a priori classification of occupations will correspond precisely with those used by actual organizations. We reconciled the categories used by the six organizations with my categories through consultation, often quite extensive, with personnel or employment officers in each organization. In some cases, as in Northside Manufacturing, this was very straightforward. Other cases involved more effort. For the most part, however, the job titles we obtained correspond quite closely to those used in conventional occupational classification schemes.

A sample of job matches is simultaneously a sample of successful job candidates. That is, the study design excludes those rejected for positions, either by failing to pass the initial screens or by losing in the latter stages of job competition (fn 4). Thus, we have to some degree selected on the dependent variable of occupational attainment. We mitigated this problem as much as possible by asking appointing managers to compare the successful appointee with other candidates, and to indicate in some detail what made this candidate the best available choice. A subsequent study of candidates who failed to make the grade would be of considerable interest. Still, while we did not interview rejected candidates, we did construct the interviews so that we know something about them.

IV. Conceptualization and Measurement

Since there was not a methodological literature to draw upon in many cases, many of the interview questions asked of appointees and hiring managers were designed especially for this study. Again, in this paper I limit my attention to the role of educational credentials in job assignment (fn 5), and I make no effort here to present substantive findings except to illustrate methodological points. Most of the questions pertaining to education asked of employees (i.e., the supply side) had counterparts on the employer (or demand) side. Taken by themselves, an analysis of the responses to either the job candidate questions or the employer questions would permit an examination of either job search or employer decision making.

Taken together, they permit a study of job matching. I sought information in four broad areas: the role of educational choice; the effects of schools; overeducation; and education as a hiring factor.

The role of educational choice

As explained above, there are many theories that infer how employers evaluate educational credentials. To a lesser but still important degree, these theories also attempt to explain why individuals make decisions on how much schooling to attain. Economic theories in particular assume that labor market participants act rationally, at least within the confines of the information available to them, which would suggest that job seekers pursue schooling to the extent that they believe that profit-maximizing employers value it.

Surprisingly, we know very little about why individuals make the educational decisions that they do. This is in spite of the clear importance of such decisions. Manski and Wise's valuable study, College Choice in America, for instance, found that "individual application decisions are much more important than college admissions decisions in the determination of attendance. Self-selection is the major determinant of attendance" (1983:4). Still, Manski and Wise did not have the data to enable them to determine the reasoning behind these individual decisions, but instead inferred such reasoning by examining the differences between attenders and non-attenders.

To more fully explore the supply side of the job match, we asked appointees why they had chosen the amount and type of education that they had. We offered the following options to this question:

Which of the following helped you decide on the amount and type of education you would get? You...

a. liked school
b. needed the education to get a good job
c. were preparing yourself for a specific kind of work
d. went to school because there was no work available
e. quit school because you needed money
f. quit school because you were bored with school
g. quit school because you had bad grades
h. quit school because of family responsibilities

Generally, we were trying to determine here if individuals really do "invest" in themselves primarily for economic purposes, or if other factors are involved. Options b and c reflect economic factors. Other factors were intrinsic (i.e., "liked school"), while others represented constraints on a candidate's educational attainment (d-h). Since many respondents had multiple reasons for their educational decisions, we asked which of these factors was the most important to the individual. To more fully examine the economic basis of educational decisions, we also asked appointees if they would have selected a different amount or type of schooling had they been preparing for the

specific positions they now hold. Thus, while my study does not have the coverage of Manski and Wise's study, it permits a richer and more detailed appraisal of the ways in which labor market participants gather and evaluate information.

What do schools do?

A major difference between technical-function theories on the one hand and allocation (i.e., screening, signalling, or credentialist) theories on the other involves the degree to which schools "do" something to the people passing through them. This concerns whether schooling provides people with socialization and training, or whether it merely labels and allocates them (Kerckhoff, 1976; Kamens, 1981). We therefore asked appointees if they use any knowledge or skills that they learned in school on the job, and to describe what sorts of knowledge or skills they mean. While we presented the latter part of this question in an open-ended manner, our aim was to determine if people believed that their schooling enhanced specific technical skills, or if it developed more general orientations and dispositions, whether cognitive or non-cognitive (i.e., problem solving ability, more open attitudes, etc.). Coding this variable in these terms proved quite straightforward, although some respondents observed that schooling emhanced both general and specific skills. Substantively, of course, we wanted to know if these perceptions varied throughout the occupational hierarchy.

We also asked the broader question, "In general, in your opinion, in what way or ways does schooling affect a worker's

performance on the job?" This was also asked of employers. The question was open-ended, and we coded the responses into categories suggested by the data themselves. This resulted in the following set of categories:

01. basic skills; general knowledge
02. discipline
03. "poise"; manners; professional behavior
04. work habits
05. ability to communicate
06. broad/open attitudes or dispositions
07. perseverence; industriousness; finishing a project
08. necessary credential
09. problem solving methods
10. specific technical skills
11. theoretical as opposed to practical learning
12. negative effects in terms of personality or interpersonal relations
13. other negative effects
14. no effect
15. don't know; can't answer

Obviously, this is a broad and somewhat disparate list. The fact that these categories are derived from open-ended responses, however, indicates that this diversity more accurately reflects how labor market information is perceived and processed than do theories focusing on only one or two factors.

The corresponding steps on the employer side were to ask each appointing manager if he or she believed that the candidate uses skills on the job that were learned in school, and if these skills could have been learned somewhere else. Since we know that more educated job candidates tend to get ahead, the point of these questions was to determine just what it is employers think they are getting when they hire individuals with more schooling than other candidates. Again, this is a question that has been routinely unexamined in the literature. We can thus examine why employers select on educational credentials, and what kinds (if any) of connections they make between the content of formal schooling and effective job performance.

Overeducation

An important feature of the debate on the matching of educational credentials to positions is whether job candidates can be educationally overqualified as well as underqualified for positions (Clogg and Shocky, 1984). Proponents of the overeducation thesis argue that many American workers are schooled to levels well beyond those required for satisfactory performance in their jobs, producing both lessened productivity and greater job dissatisfaction.

The overeducation issue is typically examined from the employer's perspective, with observers asking why employers persist in irrationally selecting employees on the basis of educational background in the absence of any evidence that more

educated workers are any more productive than the less schooled. One can identify a supply side dimension as well, which asks if job candidates see themselves as overqualified for positions. Presumably such perceptions would structure how they approach their job search activities.

To address this issue, we asked employees a pair of questions on the extent to which they believed that their education made them underqualified or overqualified for jobs that they might want. We also asked them to explain their reasoning behind their judgements. The questions were:

Do you feel that the amount and type of education that you have is an important limit to your chances of getting a better job here or elsewhere?

Do you feel that there are any jobs that you might want for which you have too much education?

Of particular relevance to the overeducation thesis, however, is the question of what employers deem mismatches between schooling and selection. We therefore put the following set of questions to employers:

If (this candidate) had less education than he/she does, would you still have appointed him/her to this position?

(If yes), how little education would you be willing to

accept?

If (this candidate) had more education than he/she does, would you still have appointed him/her to this position?

(If yes), how much education would you be willing to accept?

Coding these sorts of variables was more difficult than it might initially appear. For example, some employers (particularly those in the public organizations) had little discretion to raise or lower educational criteria that were specified in job descriptions. While they were often allowed some leeway in "trading off" educational credentials for relevant work experience, their decisions were much more constrained than those of some other hiring managers.

Further, questions about educational ceilings or floors in the specific appointment were of little relevance when the employer had already reported that the candidate's schooling had not been a factor in the hiring or promotion decision. This situation differed from those in which the employer reported that the candidate's education did matter, but that there was still no lower or upper limit. We also found a large number of managers who qualified their answers in some way, leading us to include a category for "it depends." That is, the educational ceilings or floors that employers construct for hiring decisions are often flexible, depending on the circumstances of the appointment and other characteristics of the applicant.

Education as a hiring factor

Finally, we asked both parties to the employment transaction a detailed series of questions regarding the importance of the candidate's educational background as a factor in the particular hiring or promotion decision. (This was nested in a broader question designed to examine the role of all possible factors in the appointment.) We asked not only about the role of the candidate's length of schooling, but also about the particular institution that the candidate attended, the type of training received, and any other features of the schooling experience that might have been pertinent. Unlike many of the previous questions, these questions pertained to the specific job match, rather than to the general orientations of job candidates and hiring managers. Coding could be handled quite simply, on a scale from "very important" to "not at all important." The importance of this approach, again, is that it gets us beyond the need to infer the role of educational credentials from the distribution of individuals in occupational hierarchies.

V. Theoretical Implications and Research Applications

Adducing the logic that people get ahead not strictly on the basis of their own efforts and merit but also by being selected by organizational decision makers, the research described above opens up a line of inquiry on the role of schooling in social stratification that has not been adequately examined in the literature. By interpreting attainment as the culmination of a

set of contingent organizational decisions, such research can help unravel the complexities and ambiguities that underlie the parameters of models of attainment. Thus, this sort of research can lead to important knowledge of the determinants of inequality in the labor force.

An underlying assumption of this research program is that a fundamental basis of social stratification lies in the structure and process of complex organizations. This points to the need to develop a richer theoretical framework of how organizations structure processes of stratification (Baron, 1984; Rosenbaum, 1984) and how organizations make decisions. Such theoretical work is now underway, yet for the most part the empirical analyses flowing from this work have simply adopted the established measurement procedure of status attainment research (fn 6). If we are to adequately shift the focus from the supply side to the demand side (and hence, to the job match), we must also develop the methodological technology appropriate to these questions. Such technology must be based to an increasing degree on organizational theory.

Further study of job matching will also require more reliance on the sociology of education. This is particularly evident in the area of educational choice. If stratification theory can be faulted for not directly investigating employers' perceptions of job candidates and their motivations for their choices, so can educational researchers be faulted for neglecting the reasoning behind educational decisions. Manski and Wise

(1983) is an important contribution, but suffers the same weaknesses as stratification research in that it eventually must infer what needs to be examined directly.

As mentioned above, in this paper I only discuss those aspects of the job match that pertain to schooling. The full study also considers those issues listed in footnote 5. These issues are at least as complex as those reported on here, and further studies of job matching should continue to develop this range of concerns.

Finally, we can point to the usual sort of recommendations to expand the range of occupations and organizations to which the interviews are applied, and to develop larger and more varied samples. This is surely true, but at the same time it would be a mistake to get prematurely locked into a rigid set of operational definitions and measurement procedures. While the techniques reported here are conceptually and empirically grounded, the state of the art is still such that considerable work needs to be done before our "job matching" measurements have reached the level of sophistication of our status attainment measurements.

FOOTNOTES

1. See Riley (1979) for an interesting effort to use data drawn from employers to evaluate the screening position.

2. I use the term "job candidates" rather than "job applicants" or "job seekers" because many of our respondents who had been hired or promoted into positions reported that they had not actively sought these positions. In this sense, even "job candidates" implies a more active employee role than is sometimes the case.

3. Hallak and Caillods' classification is not entirely clear. At one point they list ten categories (1980:145), and at another only nine (1980:146-147). Elsewhere (Bills, 1985), I explain my modifications of Hallak and Caillods' categorization.

4. It also excludes those who were dissuaded from applying in the first place, either because of a self-perception of being inadequately qualified or because of a lack of knowledge of the job opening.

5. Elsewhere (Bills, 1985), I provide a parallel discussion of the conceptualization and measurement of four other principal features of the job match:

1) How the job candidate learned of and chose the job versus how the opening occurred and how the employer learned of the

candidate;

2) The appointee's use and perception of the efficacy of various methods of job search (including the degree to which he or she continues to search) versus the employer's methods of searching for workers (i.e., recruiting), including the distinction between the internal and external labor supply;

3) How job candidates gather and evaluate labor market information versus how employers gather and evaluate labor market information;

4) The worker's appraisal of the importance of various hiring criteria in this appointment versus the employer's perception of their importance (including the construction of screens, the appointment process, and the establishment by the organization of various hiring standards).

6. Researchers exploring the strength of interpersonal ties in the labor market (Lin et al., 1981; Granovetter, 1974) have, of course, beeen developing innovative measurement procedures based on network theory.

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